

PATENT APPLICATION
Attorney Docket No. Q45026

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of

Tsutomu Hashizume, et al.

Reissue Application of U.S. Patent
No. 6,089,701 issued on July 18, 2000

Filed: Herewith

For: INK JET RECORDING HEAD HAVING REDUCED STRESS CONCENTRATION
NEAR THE BOUNDARIES OF PRESSURE GENERATING CHAMBERS

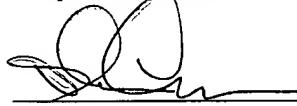
OFFER TO SURRENDER LETTERS PATENT UNDER 37 C.F.R. § 1.178

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

The Letters Patent for the above-described "INK JET RECORDING HEAD HAVING REDUCED STRESS CONCENTRATION NEAR THE BOUNDARIES OF PRESSURE GENERATING CHAMBERS", U.S. Patent No. 6,089,701 issued on July 18, 2000. The Assignee hereby formally proffers to surrender the Letters Patent at the successful conclusion of prosecution of the reissue application filed concurrently herewith.

Respectfully submitted,



Richard C. Turner
Registration No. 29,710
Stan Torgovitsky
Registration No. 43, 958
Attorneys for Applicants

SUGHRUE, MION, ZINN
MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3202

Date: December 22, 2000

PATENT APPLICATION
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NEAR THE BOUNDARIES OF PRESSURE GENERATING CHAMBERS

ASSENT OF ASSIGNEE TO REISSUE

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

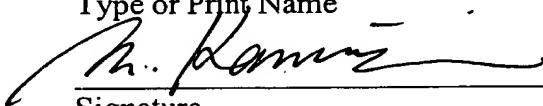
SEIKO EPSON CORPORATION, the Assignee of the entire right, title and interest of
the invention (by virtue of an assignment as recorded by the U.S. Patent and Trademark Office
on February 6, 1998 at Real 8963, Frame 0375), described and claimed in the above-identified
U.S. Patent No. 6,089,701, hereby assents to the reissue of said patent in accordance with the
Reissue Declaration and accompanying papers submitted herewith.

I undersigned (whose title is supplied below) is authorized to act on behalf of the
assignee.

Date: November 22, 2000

Masataka Kamiyanagi

Type or Print Name



Signature

Title Director, Intellectual
Property Division

PATENT APPLICATION
Attorney Docket No. Q45026

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of

Tsutomu Hashizume, et al.

Reissue Application of U.S. Patent
No. 6,089,701 issued on July 18, 2000

Filed: Herewith

For: INK JET RECORDING HEAD HAVING REDUCED STRESS CONCENTRATION
NEAR THE BOUNDARIES OF PRESSURE GENERATING CHAMBERS

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175

We, Tsutomu HASHIZUME, Tetsushi TAKAHASHI, and Akira MATSUZAWA, all of Japan, do hereby declare and state as follows:

Our residence, post office address and citizenship are as stated below next to our names. We believe that we are the original, first and joint inventors of the invention "INK JET RECORDING HEAD HAVING REDUCED STRESS CONCENTRATION NEAR THE BOUNDARIES OF PRESSURE GENERATING CHAMBERS" which is described and claimed in the above-identified U.S. Patent No. 6,089,701 issued on July 18, 2000 and assigned to SEIKO EPSON CORPORATION, the specification of which is submitted with this application for reissue; and that we have reviewed and understand the contents of the specification, including the new claims, as added in this application for reissue.

In compliance with 37 C.F.R. § 1.175(a)(7) and 1.63(b)(3), we hereby acknowledge our duty to disclose information of which we are aware which is material to patentability as defined in 37 C.F.R. § 1.56.

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175
REISSUE APPLICATION OF U.S. PATENT NO. 6,089,701

The priority is claimed from:

<u>Japanese Patent Application</u>	<u>Filing Date</u>
Hei. 8-88469	April 10, 1996
Hei. 8-344568	December 9, 1996
Hei. 9-083245	March 17, 1997

In compliance with 37 C.F.R. §§ 1.175(a), we hereby declare and state that the above-identified U.S. Patent No. 6,089,701 is believed to be at least partly inoperative for the reason that we claimed less than we had the right to claim in the patent.

The purpose of seeking a reissue patent is to correct the insufficiency in the patented claims by presenting new claims which are commensurate with the true scope of our invention.

Pursuant to 37 C.F.R. § 1.175(a)(1), we state as follows at least one error in the patent, which is relied on as a basis for this reissue. The patented claims 1 - 12 are apparatus claims directed to an ink jet recording head. The specification also describes process steps for forming the inventive ink jet recording head, but there are no claims directed to the method. Therefore, new claims directed to the method of forming an ink jet recording head in accordance with the invention, are hereby added by this reissue to correct an error in claiming less than we had a right to claim.

Pursuant to 37 C.F.R. § 1.175(a)(2), we state that all errors being corrected in the reissue application up to the time of filing this declaration arose without any deceptive intention.

We hereby appoint John H. Mion, Reg. No. 18,879; Thomas J. Macpeak, Reg. No. 19,292; Robert J. Seas, Jr., Reg. No. 21,092; Darryl Mexic, Reg. No. 23,063; Robert V. Sloan,

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175
REISSUE APPLICATION OF U.S. PATENT NO. 6,089,701

Reg. No. 22,775; Peter D. Olexy, Reg. No. 24,513; J. Frank Osha, Reg. No. 24,625; Waddell A. Biggart, Reg. No. 24,861; Louis Gubinsky, Reg. No. 24,835; Neil B. Siegel, Reg. No. 25,200; David J. Cushing, Reg. No. 28,703; John R. Inge, Reg. No. 26,916; Joseph J. Ruch, Jr., Reg. No. 26,577; Sheldon I. Landsman, Reg. No. 25,430; Richard C. Turner, Reg. No. 29,710; Howard L. Bernstein, Reg. No. 25,665; Alan J. Kasper, Reg. No. 25,426; Kenneth J. Burchfiel, Reg. No. 31,333; Gordon Kit, Reg. No. 30,764; Susan J. Mack, Reg. No. 30,951; Frank L. Bernstein, Reg. No. 31,484; Mark Boland, Reg. No. 32,197; William H. Mandir, Reg. No. 32,156; Brian W. Hannon, Reg. No. 32,778; Abraham J. Rosner, Reg. No. 33,276; Bruce E. Kramer, Reg. No. 33,725; Paul F. Neils, Reg. No. 33,102; Brett S. Sylvester, Reg. No. 32,765; Robert M. Masters, Reg. No. 35,603, George F. Lehnigk, Reg. No. 36,359, John T. Callahan, Reg. No. 32,607 and Steven M. Gruskin, Reg. No. 36,818, my attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and request that all correspondence about the application be addressed to **SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC**, 2100 Pennsylvania Avenue, N.W., Washington, D.C. 20037-3213.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175
REISSUE APPLICATION OF U.S. PATENT NO. 6,089,701

First Inventor

First Name Tsutomu Last Name Hashizume

Residence Nagano-ken, Japan

Signature Tsutomu Hashizume

Post Office Address: c/o SEIKO EPSON CORPORATION,
3-5, Owa 3-chome, Suwa-shi, Nagano-ken, Japan

Citizenship Japan

Date November 22, 2000

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175
REISSUE APPLICATION OF U.S. PATENT NO. 6,089,701

Second Inventor

First Name Tetsushi
Last Name Takahashi

Residence _____ Nagano-ken, Japan

Signature _____ *Tetsushi Takahashi*

Post Office Address: _____ c/o SEIKO EPSON CORPORATION,

_____ 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, Japan

Citizenship _____ Japan

Date _____ Nov 20, 2000

Third Inventor

First Name Akira
Last Name Matsuzawa

Residence _____ Nagano-ken, Japan

Signature _____ *Akira Matsuzawa*

Post Office Address: _____ c/o SEIKO EPSON CORPORATION,

_____ 3-5, Owa 3-chome, Suwa-shi, Nagano-ken, Japan

Citizenship _____ Japan

Date _____ Nov 20, 2000

Assignment

Whereas, I/We, Tsutomu Hashizume, Tetsushi Takahashi and
Akira Matsuzawa of Nagano, Japan

xafix

hereinafter called assignor(s), have invented certain improvements in

INK JET RECORDING HEAD

and executed an application for Letters Patent of the United States of America therefor on
May 26, 1997; and

Whereas, Seiko Epson Corporation of 4-1,
Nishi-Shinjuku 2-chome, Shinjuku-ku,
Tokyo, Japan

(assignee), desires to acquire the entire right, title, and interest in the application and invention, and to
any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its
successors and assigns, the entire right, title and interest in the application and the invention disclosed
therein for the United States of America, including the right to claim priority under 35 U.S.C. §119, and
I/we request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth
in the application to the assignee, its successors and assigns; and I/we will execute without further
consideration all papers deemed necessary by the assignee in connection with the United States application
when called upon to do so by the assignee.

I/We hereby authorize and request my attorneys SUGHRUE, MION, ZINN, MACPEAK & SEAS of
2100 Pennsylvania Avenue, N.W., Washington, D.C. 20037-3202 to insert here in parentheses (Application
number 08/835,748, filed April 10, 1997) the filing date and application
number of said application when known.

Date: 05/26/1997 s/ Tsutomu Hashizume

Date: 05/26/1997 s/ Tetsushi Takahashi

Date: 05/26/1997 s/ Akira Matsuzawa

Date: s/ _____

Date: s/ _____

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JANUARY 23, 1998

PTAS

SUGHRUE, MION, ZINN, ET AL.
DARRYL MEXIC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, D.C. 20037-3202



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RECORDATION DATE: 11/24/1997

REEL/FRAME: 8833/0354
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HASHIZUME, TSUTOMU

DOC DATE: 05/26/1997

ASSIGNOR:

TAKAHASHI, TETSUJI
Tetsuji

DOC DATE: 05/26/1997

ASSIGNOR:

MATSUZAWA, AKIRA

DOC DATE: 05/26/1997

ASSIGNEE:

SEIKO EPSON CORPORATION
4-1, NISHI-SHINJUKU 2-CHOME, SHINJUKU-KU
TOKYO, JAPAN

SERIAL NUMBER: 08835748
PATENT NUMBER:

FILING DATE: 04/10/1997
ISSUE DATE:

DOROTHY RILEY, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

02-23-1998

MRN 2/6/98



To the Honorable Commissioner of Patents and Trademarks: Please

100639778

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RECEIPT ACCTNG. DIV.

1. Name of conveying party(ies):
Tsutomu HASHIZUME, Tetsushi TAKAHASHI and Akira MATSUZAWA

2. Name and address of receiving party(ies)?

Name: SEIKO EPSON CORPORATION

Additional name(s) of conveying party(ies) attached?
 yes no

Internal Address: 4-1, Nishi-Shinjuku, 2-chome, Shinjuku-ku, Tokyo, Japan

3. Nature of Conveyance:

Street Address: Same As Above

Assignment Merger

City State Zip

Security Agreement Change of Name

Additional name(s) & address(es) attached?

Other-to correct Assignor's Name at Reel 8833, Frame 0354

yes no

Execution Date: May 26, 1997

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No(s).

08/835,748

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

6. Total number of applications and patents involved: One

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Suite 800
Washington, D.C. 20037-3202

7. Total Fee (37 CFR 3.41): \$ 40.00

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9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Darryl Mexic

Name: Darryl Mexic Reg. No. 23,063

February 6, 1998

Date

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TOTAL NUMBER OF PAGES COMPRISING COVER SHEET, ATTACHMENTS AND DOCUMENT: 5

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NOV 24 Q45026

12-12-1997

To the Honorable Commissioner of P.

1. Name of conveying party(ies):
Tsutomu HASHIZUME, Tetsuji TAKAHASHI and Akira
MATSUZAWA
TetsushiAdditional name(s) of conveying party(ies) attached?
 yes no

3. Nature of Conveyance:

 Assignment Merger
 Security Agreement Change of Name
 Other

Execution Date: May 26, 1997

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

08/835,748

Additional numbers attached? Yes No

B. Patent No(s).

5. Name and address of party to whom correspondence concerning document should be mailed:

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Suite 800
Washington, D.C. 20037-32026. Total number of applications and patents involved:
One (1)7. Total Fee (37 CFR 3.41): \$ 40.00
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9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Darryl Mexic
Name Darryl Mexic Reg. No. 23,063

November 24, 1997

Date

TOTAL NUMBER OF PAGES INCLUDING COVER SHEET, ATTACHMENTS AND DOCUMENT: 2

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APRIL 07, 1998

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CORRECTED NOTICE

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RECORDATION DATE: 02/06/1998

REEL/FRAME: 8963/0375
NUMBER OF PAGES: 3

BRIEF: TO CORRECT ASSIGNEE'S NAME AT REEL 8833, FRAME 0354

ASSIGNEE:

HASHIZUME, TSUTOMU

DOC DATE: 05/26/1997

ASSIGNEE:

TAKAHASHI, TETSUSHI

DOC DATE: 05/26/1997

ASSIGNEE:

MATSUZAWA, AKIRA

DOC DATE: 05/26/1997

ASSIGNEE:

SEIKO EPSON CORPORATION
4-1 NISHI-SHINJUKU
2-CHOME, SHINJUKU-KU
TOKYO, JAPAN

SERIAL NUMBER: 08835748
PATENT NUMBER:

FILING DATE: 04/10/1997
ISSUE DATE:

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